



UNITED STATES PATENT AND TRADEMARK OFFICE

02

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------|------------------|
| 10/785,100 | 02/25/2004 | Wein-Town Sun | 8970.0004 | 8798 |
| 24504 | 7590 | 05/18/2005 | | |
| THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP 100 GALLERIA PARKWAY, NW STE 1750 ATLANTA, GA 30339-5948 | | | EXAMINER A, MINH D | |
| | | | ART UNIT 2821 | PAPER NUMBER |

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/785,100

Applicant(s)

SUN, WEIN-TOWN

Examiner

Minh D. A

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/25/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mikami et al (US 6,661,397) in view of Dean (US 2003/0042834).

Regarding claims 1, 10 and 17, Mikami discloses a current-driven display device comprising: a plurality of data lines (5); a plurality of scan lines (4) formed generally orthogonal with the plurality of data lines (5); an array of pixels driven by a current, each of the pixels being formed near a crossing of one of the data lines (5) and one of the scan lines (4); and at least one power supply line (pixel power supply having two power supply (6 and 7) coupled to the pixels. See figures 1-5, col.3, lines 21-67 to col.8, lines 1-15.

Mikami does not disclose that, a current density at a cross section of the power supply line is no greater than approximately 10^5 ampere per square centimeter (A/cm^2).

Dean discloses a current density at a cross section of the power supply line is no greater than approximately 10^5 ampere per square centimeter (A/cm^2). See col.6, line [0052] to col.7, lines [0053] to line [0054].

It would have been an obvious to one of ordinary skill in the art at the time the invention was made to employ a current density at a cross section of the power supply line is no greater than approximately 10^5 ampere per square centimeter (A/cm^2) such as that suggested by Dean in display of Mikami in order to improve an electroluminescence display device and avoiding electro migration effects for display device.

Regarding claims 2 and 11, Mikami discloses that, the cross section of the power supply line further comprising a width and a thickness. See figures 1-5.

Regarding claims 3 and 13, Mikami discloses each of the pixels further comprising an electroluminescence device. See figures 1-5.

Regarding claims 4, 12 and 18, Mikami discloses an anode, a cathode, and an electroluminescence layer formed between the anode and the cathode. See figure 2.

Regarding claims 5 and 14, Mikami discloses the electroluminescence layer further comprising an organic electroluminescence material. See figures 1-12.

Regarding claims 6 and 15, Mikami discloses the anode of the electroluminescence device being coupled to a first power supply line via a driving and controlling circuit. See figures 1-12.

Regarding claims 7 and 16, Mikami discloses the cathode of the electroluminescence device being coupled to a second power supply line. See figures 1-12.

Regarding claim 19, Mikami discloses the electroluminescence layer with an organic electroluminescence material. See figures 1-12.

Allowable Subject Matter

3. Claims 8-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does not teach that, the width ranges from approximately 100 micro meters to 2000 micro meters and the thickness ranges from approximately 2000 angstroms to 6000 angstroms from power supply lines recited in dependent claims 8-9.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Park et al (2004/0145306) and Watanabe et al (US 2005/0001792) are cited to show a display device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 –2:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (571) 272-1834. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and (703) 872-9319 for final communications.

Art Unit: 2821

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (571) 272-1553.



TUYET VO
PRIMARY EXAMINER

Examiner

Minh A

Art unit 2821

5/18/05